TRANSMITTAL OF APPEAL BRIEF (Large Entity)	Docket No. 2859

In Re Application Of: **WIPPERSTEG, H., ET AL**

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
10/781,092	02/17/2004	LO, S.	278	2128	6333

Invention: **METHOD OF OPTIMIZIN G...**

COMMISSIONER FOR PATENTS:

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Dated: **10/30/2008**

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UNITED STATES PATENT AND TRADEMARK OFFICE

Examiner: Lo, S. Art Unit: 2128 Docket No. 2859

In re:

Applicant: WIPPERSTEG, H., et al

Serial No.: 10/781,092

Filed: February 17, 2004

BRIEF ON APPEAL

October 30, 2008

Commissioner for Patents
P O Box 1450
Alexandria, VA 22313-1450

This is a Brief on Appeal from the final rejection of Claims 1, 2, 5, 6, 8-14 and 18-23 by the Examiner.

REAL PARTY IN INTEREST

The real party in interest in this application is Claas KGaA mbH, having a business address of Postfach 1163, D-33426 Harsewinkel, Germany.

RELATED APPEALS AND INTERFERENCES

There are no pending, appeals, interferences or judicial proceedings known to appellant, the appellant's legal representative, or assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

STATUS OF CLAIMS

The present application now contains Claims 1, 2, 5, 6, 8-14 and 18-23.

These claims were rejected by the Examiner.

Claims 3, 4, 7, 15-17 have been cancelled.

STATUS OF AMENDMENTS

The Final Office Action in this application was issued on May 20, 2008.

After the Final Office Action, no Amendments have been filed in the United States Patent and Trademark Office.

SUMMARY OF CLAIMED SUBJECT MATTER

The present application deals with a method of optimization of adjustable parameters of at least one machine.

In accordance with the present invention as defined in Claim 1, the method includes the following steps:

The first step is providing a data processing system which is a diagnosis system, as disclosed on page 17 in lines 12-20, on page 18, and on page 19, lines 1-8 and shown in Figures 2, 3. Then, optimization of adjustable parameters is performed by processing of at least one process algorithm in the data processing system. This is disclosed on page 21 in lines 11-19 and shown in Figures 2 and 3.

The process algorithm is selected to be processed from a plurality of process algorithms as explained in the paragraph bridging pages 23-24 and also shown in Figures 2-3. A process algorithm is proposed or automatically selected by the data processing system depending on data selected from the group consisting of machine-internal data, machine-external data, and target data as explained in the paragraph bridging pages 25 and 26 and shown in these drawings.

An adjustable parameter to be optimized is used, as well as a further parameter and an internal expert knowledge as a machine internal data, as explained in paragraph bridging pages 26 and 27 and shown in these drawings as well.

Then the situation patterns are defined for the process algorithms by at least a part of machine-internal data, machine-external data, target data, and combination thereof as explained in page 21, lines 7-20 and page 22, lines 1-8 and shown in the same figures.

A situation pattern is then selected which comes at least close to an instantaneous situation pattern and a process algorithm is linked to the situation pattern, depending on at least one part of the machine-internal and machine-external data with consideration of the target data defined in at least a part of an instantaneous situation process, as disclosed in the last three lines on page 23, as well as on several parts of pages 24-27 and shown in Figures 2 and 3.

The machine-internal and external data are processed by the data processing system in consideration of the target data as explained in the paragraph bridging pages 26 and 27. The further-processible output data are generated as explained in first paragraph on page 27. Then optimized adjustable parameters are obtained and used for indication to an operator or for adjustment of the machine as explained in page 22, lines 9-18 and shown in Figures 2-3.

Figures 4-5 show a specific example of realization of the inventive method which also illustrate the above-mentioned features.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claim 1, the broadest claim on file, was rejected under 35 USC 103(a) as being unpatentable over the U.S. patent to Weigelt et al in view of the U.S. patent to Bischoff.

Thus, the only ground for the rejection is whether Claim 1 is patentable under 35 USC 103(a) over the combination of the above discussed references.

As for the dependent claims, these claims depend on Claim 1, they share its allowable features, and they should be considered as allowable because of this.

ARGUMENT

With respect to the patentability of Claim 1, the broadest claim on file in view of the U.S. patents to Weigelt and Bischoff combined with one another in the Examiner's rejection of the claims under 35 USC 103(a)

In the present invention it is distinguished between a situation pattern which is described by considering concrete (current) parameters and another situation pattern which is already stored in the data processing system in the manner that the data processing system compares these different already existing situation patterns (and their specific parameters) with specific parameters of the new repair/maintenance problem. In a next step the data processing system (a computer system) chooses one of the already stored process algorithms which describes at best the new repair/maintenance situation. "At best" means in an ideal case, the chosen algorithm describes exactly the same situation, or in an also acceptable case the chosen algorithm describes a similar situation, a situation which comes close to the actual situation.

The following example of this can be as follows.

Based on sensor information or based on expert's knowledge, a repair or maintenance situation has been identified (by means of a diagnosis system) on the machine. Considering this information, a process algorithm will be started to check the repair/maintenance situation in detail. As a first result of such an investigation, the data processing system generates a description of the recognized repair/maintenance

situation/problem. In a second step the generated description will be stored in the data processing system (computer).

Such a procedure is time-consuming to get a result what is to do and in which order the identified repair/maintenance steps have to be realized. Hence, the system needs time to create a suitable work-routine for solving the identified repair/maintenance problem.

The idea behind the solution proposed in this invention is to save time for creating a repair/maintenance routine for describing another repair/maintenance case by means of using already existing repair/maintenance routine (situation patterns). An election-routing compares the new situation pattern with already stored situation patterns and chooses such a stored situation pattern which corresponds at best with the new situation pattern. Since each stored situation pattern is described by concrete (machine-internal and machine-external) parameters, the computer system can compare the several situation patterns very quickly. If a suitable situation pattern has been found [a situation pattern is selected which comes close or is identical to an instantaneous situation pattern ...], the data processing system (computer) provides the specific steps of the new repair/maintenance problem which have to be done. If the chosen situation pattern differs from the new situation pattern [at least close...], the chosen situation pattern can be amended by the operator or by any other person.

U.S. patent to Weigelt indisputably discloses a method for optimizing adjustable parameters by means of using machine-internal and machine-external signals or information and to exchange these informations between a central controlling processor 1 and different machines. For saving storage capacity and for increasing data transfer speed, the patent to Weigelt discloses cooperation procedures between the stationary central processors 1 and movable on-board processors 8 to generate jointly optimized machine parameters.

The patent to Weigelt however does not disclose any situation patterns which could be recognized and could be pre-selected for increasing the optimization process, as performed in the method of the present invention and now defined in amended claim 1.

The patent to Bischoff is limited to a single combine and the parameter optimization process of it, while no data transfer between a group of combines and a central processing unit is disclosed in this reference.

On page 5 of the Office Action the Examiner indicated that in column 6, lines 49-65 the patent to Bischoff disclosed the definition and recognition of situation patterns. "Situation patterns" means a description of current working conditions of a combine (an agricultural machine), "encoded" in machine-internal and machine-external parameters. The cited part of the patent to Bischoff however does not disclose any pattern-referred subjects.

As can be clearly seen from these references, neither Weigelt nor Bischoff want to generate optimized machine parameters by recognizing and pre-selecting situation patterns.

It is therefore believed to be clear that the new features of the present invention which are now defined in amended claim 1 are not disclosed in the references applied by the Examiner against the original claims.

It is also believed to be clear that these features provide for advantageous optimization of the adjustable parameters of machines, which can not be achieved by the solutions proposed in the references.

The original claims were rejected over the patents to Weigelt and Bischoff as being obvious under 35 U.S.C. 103(a). The references do not teach the new features of the present invention as now defined in the amended claim 1, and they do not contain any hint or suggestion for such features. In order to arrive at the applicant's invention it would not be sufficient to combine the references, but instead, the references have to fundamentally modified by including into them the new features of the present invention which were first proposed by applicants and are now defined in amended claim 1.

However, it is known that in order to arrive at a claimed invention, by modifying the references the cited art must itself contain a suggestion for such a modification. This principle has been consistently upheld by the U.S. Court of Customs and Patent Appeals which, for example, held in its decision in re Randol and Redford (165 USPQ 586) that

> Prior patents are references only for what they clearly disclose or suggest, it is not a proper use of a patent as a reference to modify its structure to one which prior art references do not suggest.

Also, as explained herein above, the present invention provides for the highly advantageous results which are not accomplished in the prior art. In connection with this it should be mentioned that as was stated by the Patent Office Board of Appeals, in the case Ex parte Tanaka, Marushima and Takahashi (174 USPQ 38):

> Claims are not rejected on the ground that it would be obvious to one of ordinary skill in the art to rewire prior art devices in order to accomplish applicants' result, since there is no suggestion in prior art that such a result could be accomplished by so modifying prior art devices.

In view of the above presented arguments it is believed that the new feature of the present invention as defined in Claim 1 are not disclosed in the references and cannot be derived from them as a matter of obviousness and therefore the present invention as defined in Claim 1 should be considered as patentably distinguishing over the art and should be allowed. The Examiner's rejection of Claim 1 should be withdrawn.

As for the dependent claims, these claims depend on Claim 1, they share its allowable features, and they should be allowed as well.

Reconsideration and allowance of the present application with all the claims currently on file is most respectfully requested.

Respectfully submitted,

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CLAIM APPENDIX

1. A method of optimization of adjustable parameters of at least one machine, comprising the following steps:

providing a data processing system, wherein the data processing system is a diagnosis system;

optimizing adjustable parameters by processing of at least one process algorithm provided in the data processing system;

selecting the process algorithm to be processed from a plurality of process algorithms;

proposing or automatically selecting a process algorithm by the data processing system depending on data selected from the group consisting of machine-internal data, machine-external data, and target data;

using an adjustable parameter to be optimized, a further parameter and an internal expert knowledge as the machine internal data;

defining situation patterns for the process algorithms by at least a part of data selected from the group consisting of machine-internal data, machine-external data, target data and combinations thereof;

selecting a situation pattern which comes at least close to an instantaneous situation pattern and a process algorithm linked to the situation pattern, depending on the at least one part of the machine-interior data and machine-exterior data with consideration of the target data which defines at least a part of an instantaneous situation pattern;

processing the machine-internal data and machine-external data by the data processing system in consideration of the target data;

generating further-processible output data;

obtaining optimized adjustable parameters; and

using the optimized adjustable parameters for indication to an operator or for adjustment of the at least one machine.

2. A method as defined in claim 1; and further comprising the step of determining the optimization of the adjustable parameters by target data selected from the group consisting of editable target data and storable target data.

Claims 3-4 cancelled.

5. A method as defined in claim 1; and further comprising the steps of editing and storing the machine-internal data, the machine-external data and the output data by the data processing system.

6. A method as defined in claim 1; and further comprising the step of operating the data processing system in a time controlled manner.

Claim 7 cancelled.

8. A method as defined in claim 1; and further comprising the step of using a traveling speed, a rotary speed of at least one threshing drum and/or the rotary speed of a blower of at least one cleaning device as the adjustable parameters to be optimized.

9. A method as defined in claim 1; and further comprising the step of using a crop-specific and/or machine-specific parameter as the further parameter; and performing the determination of the further parameter by sensors which are in operative communication with the machine or by inputting.

10. A method as defined in claim 9; and further comprising the step of using a parameter selected from the group consisting of a grain loss, a grain throughput, a crop moisture, a crop total throughput and a broken corn portion as the further parameter.

11. A method as defined in claim 9; and further comprising the step of using adjustment regions for parameters of working units of the machine as the further parameter.

12. A method as defined in claim 5; and further comprising the steps of generating the machine-external data by external systems and using plant-specific data, geographic data, weather data and/or external expert knowledge as the machine external data.

13. A method as defined in claim 12; and further comprising the step of using crop and/or data and experience knowledge as the external expert knowledge and as internal expert knowledge.

14. A method as defined in claim 1; and further comprising the step of processing a diagnosis selected from the group consisting of process diagnosis, case diagnosis, and model-oriented diagnosis with the at least one process algorithm of the data processing device .

Claims 15-17 cancelled.

18. A method as defined in claim 1; and further comprising the step of generating changed process algorithms by the data processing system depending on machine-interior data and machine-exterior data and with consideration of changeable target data.

19. A method as defined in claim 1; and further comprising the step of generating changed situation patterns by the data processing system in dependence on machine-interior data and machine-exterior data and with consideration of changeable target data.

20. A method as defined in claim 1; and further comprising the step of storing process algorithms, situation patterns or both in data sets, wherein the data sets include at least a part of machine-internal data, machine-external data and target data.

21. A method as defined in claim 1; and further comprising the step of incorporating in data processing system situation patterns and associated process algorithms and/or optimized adjustable parameters to be available for further machines.

22. A method as defined in claim 1, wherein the machine is an agricultural harvester; and further comprising the step of determining at least one process algorithm depending on harvesting conditions of the agricultural harvester.

23. A method as defined in claim 1; and further comprising the step of adapting the processing algorithm by analysis and evaluation.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

None.